Eastern Alps consists of a series of steep compressed folds of cretaceous strata rising through the Flysch and Molasse conglomerates that form the lower spurs to the north, and the summit of Säntis is the highest of one of the sharp anticlines of the range. Finer examples of sharp anticlinal peaks and ridges separated by equally acute synclinal gorges it would be difficult to find, and the well-marked petrographical and palæontological character of each zone leave no room for doubt as to the sequence and structure of the different formations. The summit of Säntis (8200 feet) is an overturned anticline of Gault, covered by a thick bed of "Seewerkalk," the highest cretaceous rock in the district, and the structure is exposed in splendid cliff sections on the sides of the peak. Prof. Heim, who is an adept at drawing panoramic sketches, was anxious that we should have an opportunity of verifying his elaborate panorama of the surrounding district, but unfortunately the mist, which had come on, did not clear off the top till the afternoon of the second day, and even then we had only a short glimpse of the glorious view beneath. Two nights were spent in the inn erected by the Alpine Club, a short distance below the observatory on the summit of Säntis, and the descent to Wildhaus was made on the north side over a steep path leading across a compressed synclinal fold of Seewerkalk, where a good example was seen of the middle part of a double fold, compressed and drawn out so as to pass almost into a thrust-plane. A better example of the "Verkehrten Mittelschenkel" was, however, seen a few days afterwards in the Mattstock near Amden, where the middle members of a compressed monoclinal fold were found in normal order from Flysch to Neocomian and Gault, but drawn out and evidently much diminished in thickness. At Obstalden, on the Wallen See, a few days were spent among the rocks on either side of the lake, a recent fall of snow having obscured the sections on the higher Alps, which we had intended to visit. One of the most interesting tectonic features of this district is an important thrust-plane, traversing the face of the Leistkamm on the north side of the lake, and repeating the section of cretaceous rocks in the mountain. The thrust-plane forms a barrier to the downward passage of water through the limestones above, and its outcrop is marked by a line of springs, one of which gushes out of the cliff in a large waterfall opposite Mühlehorn. After a visit to the Mürchenstock, with its contorted anticlinal core of Permian Verrucano conglomerate and its wrinkled skin of Jurassic rocks, we made our way southward to Glarus, and the greater part of the last week was devoted to the exploration of the celebrated "Doppelfalte" of the Glärnish, in which the red Verrucano is seen to have been pushed on to the top of Jurassic and Eocene rocks exposed in a series of magnificent mountain sections. At Lochseite, near Schwanden, a few miles south of Glarus, the massive Verrucano is seen projecting in a thick ledge from the hillside over the so-called Lochseitenkalk, a crushed irregular bed of mylonised limestone resembling that found near the great thrust-planes in the North-west Highlands. At Lochseite the thrust-plane is so sharp and clear that a knife could be drawn along between the rocks on either side, and the under-surface of the hard Verrucano is slickened and polished at places as smooth as glass. A full view of this tremendous overthrust was, however, not obtained until we had climbed some 8000 feet to the crest of the Bütistock and Kalkstöckli, between Linthal and Elm, where the sharp cut and wonderfully straight line of the great displacement was seen in profile crossing from ridge to ridge and peak to peak, and producing a marked feature in the mountain panorama. At one place where the Verrucano has been eroded off, the party rested on the smooth surface of the thrust-plane which forms the crest of the ridge, where they were photographed, with Prof. Heim standing in the midst expounding the classic sections around him. The south wing of the "Doppelfalte," or thrust-plane, was crossed between Elm and Flims at the Segnes Pass, at a height of 8615 feet, and here also the outcrop was seen in stupendous cliff sections. The overlying Verrucano being darker in colour than the limestones below, the line of displacement is everywhere very sharp and distinct. The nummulite limestone, where it approaches the thrust-plane, is drawn out and schistose, and a distinct passage was traced between unaltered nummulites and those only slightly distorted, to a rock in which they were rolled out into ribbons, which, but for the intermediate specimens, could not have been recognised as being of organic origin. The Verrucano itself is also squeezed and schistose, and the pebbles are compressed into augen, surrounded at places by sericite and mica schist. The vast interglacial (?) landslip at Flims, on the Vorder Rhein, was the last of the important objects we visited, and after a passing look at the crystalline rocks of the St. Gotthard Massiv, the party reached Lugano in detachments, where they rejoined the other members of the Congress, all highly pleased with their respective excursions across the Alps, and were greeted on their arrival by a discharge of artillery, followed in the evening by a splendid pyrotechnic display on the lake.

H. M. C.

NOTES.

THE Physical Society, which has for many years met in the Royal College of Science at South Kensington, give notice of some important changes. The Council have, after careful consideration, come to the conclusion that the meetings of the Society would be more accessible to the majority of the members if they were held in some more central situation, and the meetings will therefore henceforward be held on the same day and at the same hour as heretofore, but in the rooms of the Chemical Society, in Burlington House. All communications to the secretaries or other officers of the Society may in future be addressed to Burlington House or to the secretaries at their respective addresses as given in the list of members of the Society. The Council have also decided to initiate the publication of a series of abstracts of papers on physics, but the resources at their command being slender make it necessary to begin cautiously. At first abstracts will only be given of papers which appear in a certain number of the more important foreign magazines. They will for a time be edited by Mr. Swinburne, and will be published regularly at the beginning of each month in the form of a supplement to the Proceedings of the Society. The first number will be issued in January 1895. Should the scheme prove successful it is intended to enlarge its scope. For some time past printed copies of the more important papers have been circulated before the meetings among members who are likely to take part in the discussion on them; it has, however, been felt that cases may arise in which the author may wish that his paper should be published as soon as possible. The Council have therefore decided that, if an author so desires, and if such a course appears desirable, they will take steps to ensure that the publication of a paper is not in any way delayed in order that it may be read before publication, and that they will if necessary postpone the reading and discussion of a paper until after it has been published.

WE are informed that a petition, signed by a number of science masters, has been sent, through Sir Henry Roscoe, to the Secretary of State for War, supporting the Departmental Committee's proposal to introduce a compulsory science subject into the entrance examinations for Woolwich, which, the masters consider, will encourage thorough science teaching in the schools, and be to the advantage of education generally.

THE death is announced of Prof. Comm. Ariodante Fabretti, Director of the Historical and Philological Section of the Turin Academy of Science.

THE fourteenth annual congress of the Sanitary Institute is taking place this week at Liverpool, and was opened on Monday last by the holding of a reception in the Town Hall by the Lord Mayor of Liverpool, who is also chairman of the local committee. The new president—Sir Francis S. Powell, M.P., —afterwards delivered his inaugural address. In the evening the Lord Mayor opened an exhibition of sanitary appliances. On Tuesday the congress, divided into five sections, resumed its sittings.

THE programme for the sixty-sixth annual congress of the German Naturalists and Physicians at Vienna, from September 24 to 30, contained arrangements for no fewer than three addresses by the late Prof. von Helmholtz, all of which were to have been delivered in the general meetings. Dr. F. Klein, the Professor of Mathematics at Göttingen, has undertaken to fill one of the gaps by reading a paper upon Riemann's influence in the development of modern mathematics.

A TELEGRAM from St. Paul, [Minnesota, through Reuter's special service, on Monday gave notice of the occurrence, on the evening of Friday, September 21, of a very disastrous cyclone in America. A strip of country in Iowa, Minnesota, and Wisconsin, about 200 miles in length, is reported to have been devastated, and not only was immense destruction done to property, but serious loss of life occurred, the number of persons who perished being variously estimated at figures varying from fifty-two to one hundred. The storm was accompanied by hail and torrents of rain, as well as thunder and lightning. Starting ten miles south of Spencer, North-West Iowa, the cyclone swept across the State to the north of Emmetsburg and Algona, almost wiping out of existence the town of Cylinder and laying waste the country districts in its track. Passing by Mason City, it ravaged the country to the north-west of Osage, and then changed its direction somewhat towards the north-east, crossing the Minnesota line and working great havoc in Leroy, where a fire broke out and a whole block of houses was destroyed. The cyclone swept down Spring Valley, and then turned again to the east, wrecking the hamlets of Homer and Lowther. It next crossed the Mississippi and destroyed many farm buildings near Marshland, Wisconsin. Considerable damage was also done at Dodge Centre, though it was not in the path of the main cyclone.

A CENTRAL NEWS telegram of September 25 announces that a destructive storm has occurred in Japan, by which the districts of Okita and Twate have been laid waste. Fifteen thousand houses are reported to have been destroyed, and 300 persons to have perished. Great havoc has also been wrought among the shipping.

UNIVERSITY COLLEGE, Dundee, has been benefited to the extent of some £35,000 by the bequest of the late Mrs. Margaret Harris, of Dundee.

DR. A. ZIMMERMANN has been appointed Extraordinary Professor of Botany at the University of Tübingen; and Dr. Solereder Curator of the Botanical Institute at Munich.

ACCOUNTS have been received from Prof. Stirling, F.R.S., of the safe return to Adelaide, South Australia, of the Horn Expedition for the exploration of the central portion of that country, the departure of which was announced in these columns some three months ago (p. 174). We are glad to say that considerable success has attended the whole journey, no doubt in consequence of the foresight with which preparations had been made for it; and though the work of the expedition was at times sufficiently trying, nothing that could be called a misadventure took place. Above all, there was no collision, nor indeed any trouble with the natives; and there had been good rains in the Macdonnell Ranges, the examination of the western termination of which formed the chief work to be done. The course of the expedition is briefly outlined by Prof. Stirling as follows:—From Crown Point the party traversed the Finke River to running water; thence the Palmer River to Tempe Downs, the Levi Range, Petermann Creek, and the George Gilles Range, where one section diverged to Ayers's Rock and Mount Olga, the rest proceeding westward to Lacorie's Creek and northward to Glen Edith, along Carmichael Creek to Mereenie Bluff, thence into the northern watershed following Darwent Creek to Haast's Bluff, and so eastward to Glen Helen. The united party then travelled eastward to Mount Sonder, which was ascended, and thence through the southern ranges of the Macdonnells to the Finke River and Hermannsburg. Here section one again diverged to the Glen of Palms, and another to the North Macdonnells by way of Ellery's Creek and Brinkley's Bluff to Aine Springs, where it was met by the other members of the expedition, some of whom had journeyed thither by Owen's Springs, and others by Stuart's Pass and Burt's Plains. The zoological collections formed are said to be generally good, and it has again been Prof. Stirling's good fortune to discover a new type of Marsupial. This is stated to be about as big as a small rat, with a shrew-like aspect, and a very curious flattened and fat tail. Its scientific description will probably be undertaken by Prof. Baldwin Spencer. Prof. Stirling again met with his old friend *Notoryctes*, but only obtained two examples, one of them being alive, though it soon died, notwithstanding all the care that was taken of it. The rare Alexandra parakeet was also met with; but in one locality only. Some twenty new species of terrestrial mollusks seem also to have been found, and it is expected that about seven or eight new species of plants are contained in the botanical collection, which shows a greatly extended range of many kinds that had before been supposed to be much restricted. An examination of the geological formations is adverse to the hope of metalliferous developments to the southward of the Macdonnell Ranges. It remains to be said that all the journeying was accomplished by the aid of camels, which, as before, proved themselves to be essential agents in the exploration of Central Australia. The mode in which the scientific results of the expedition are to be published is uncertain, and possibly will not be decided until the return to Adelaide of Mr. Horn, who defrayed all, or nearly all, the cost, and is accordingly to be congratulated—together with the several members of the expedition—on the success which has attended an enterprise which has been conducted with so much good spirit.

WE learn from the *Botanical Gazette* that an expedition through Eastern Africa for the collection of natural history specimens, and to secure photographs, was intended to start from Pretoria about August 1. Passing through Matabeleland, the extreme western portion of the East African Portuguese possessions, and along the western shore of Lake Nyassa, it expected to reach Zanzibar in about twelve months. The chief attention will be paid to plants and insects.

DR. A. BALDACCI is at present engaged on a botanical expedition in the Balkan Peninsula, with the especial object of exploring the mountain-chains of Albania.

WE learn, from the *American Naturalist*, that the University of Illinois is about to open a permanent station on the Illinois River, for the biological study of the flora and fauna of the waters of that State. The laboratory will be established at Havana, and, together with the State Fish Commission, will be under the direction of Prof. S. A. Forbes. Among the problems to be investigated are the effect of the periodical overflow and recession of the river on the abundance, variety, and interaction generally of the various groups of plants and animals represented in those waters.

THE following are the subjects for competition for the two Walker Prizes in Natural History, given annually by the Boston (Mass.) Society of Natural History for the next two years:—1895: A study of the "Fall Line" in New Jersey; (2) a study of the Devonian formation of the Ohio Basin; (3) relations of the order Plantoginaceæ; (4) experimental investigations in Morphology or Embryology. 1896: (1) A study of the area of schistose or foliated rocks in the Eastern United States; (2) a study of the development of River Valleys in some considerable area of folded or faulted Appalachian structure in Pennsylvania, Virginia, or Tennessee; (3) an experimental study of the effects of close-fertilisation in the case of some plant of short cycle; (4) contributions to our knowledge of the general morphology or the general physiology of any animal, except man. The memoirs must be written in the English language, and the prizes of the value of 60 and 50 dollars respectively—the competition for which is open to all—will not be awarded unless the memoirs presented are of adequate merit. Each memoir must be accompanied by a sealed envelope enclosing the author's name and superscribed with a motto corresponding to one borne by the manuscript, and must be in the hands of the Secretary on or before the first of April of the year for which the prize is offered.

THE French Society for the Encouragement of National Industry has issued a list of prizes to be offered for competition next year in connection with chemical research. The following are among the principal subjects proposed: (1) Recent progress in the manufacture of chlorine; prize, 2000 francs. (2) The utilisation of the residues of manufactories; prize, 1000 francs. (3) A prize of 2000 francs for an experimental study of the physical or mechanical properties of one or several metals or alloys, chosen from those that are in current use. (4) 2000 francs for manufacturing in France, for trade purposes, anhydrous sulphuric acid and "smoking" sulphuric acid. A special note is given with each subject explaining the reasons for which the prize is offered, but it is understood that the money will be withheld in the event of the papers sent in not proving sufficiently interesting.

THE Entomological Society will meet on Wednesday, October 3, at 8 p.m., when the following papers will be read:—"Catalogue of the *Pterophoridæ*, *Tortricidæ*, and *Tineidæ* of the Madeira Islands, with notes and descriptions of New Species," by Lord Walsingham, F.R.S.; "Palæarctic Nemouræ," by Kenneth J. Morton.

THE majority of the Medical Schools of the metropolis will open on Monday next, and in several instances an introductory address will be dispensed with, and in its place some form of festive gathering will be held. Addresses will, however, be delivered as follows:—At St. George's Hospital, by Dr. Isambard Owen, the dean of the school; at Guy's Hospital, by Mr. Lockhart Stephens; at St. Mary's Hospital, by Dr. Scanes Spicer; at the Middlesex Hospital, by Dr. Boxall; at University College Hospital, by Dr. H. R. Spencer; at Westminster Hospital, by Mr. G. Hartridge; and at the School of Medicine for Women, by Miss M. Sturge. There will be dinners in connection with the following hospitals:—St. Bartholomew's, St. Thomas's, the London, St. George's, King's College, St. Mary's, the Middlesex, and the Westminster. At the Charing Cross Hospital there will be an evening reception, at which the prizes for the year will be distributed by Prof. Alexander Macalister, F.R.S. The Rector of Lincoln College, Oxford, will distribute the prizes at the St. Thomas's Hospital.

PROF. H. ALLEYNE NICHOLSON will deliver the Swiney Lectures on Geology on the Mondays, Wednesdays and Fridays of October, taking as his subject "The Making of the Earth's Crust." The lectures, for which no charge for admittance is made, will be delivered at 3 p.m. in the Lecture Theatre of the South Kensington Museum. The Swiney Lecturer for next year is Dr. J. G. Garson.

THE eighteenth course of lectures of the Sanitary Institute will be delivered at the Parkes Museum, Margaret Street, W., at 8 p.m. on each Monday, Wednesday, and Friday of this autumn, from Wednesday, October 17, when the opening lecture, which is specially intended for those desirous of becoming sanitary officers, will be delivered. The secretary of the institute will be happy to supply full information respecting the lectures.

THE following popular science lectures will be delivered at the Royal Victoria Hall, Waterloo Bridge-road, S.E., during the coming month:—October 2, on "Hearing," by Prof. W. D. Halliburton; October 9, on "Wonders in Nature," by Mr. R. Kerr; October 16, on "The Work of the Air on the Earth," by Mr. F. W. Rudler; October 30, on "Light, what it is and how it is measured," by Prof Carlton Lambert. There will also be a lecture on October 23, but the subject has yet to be decided upon. Each lecture will be illustrated by means of the lantern.

THE prospectus has been issued of a very elaborate "Systematic Botany of North America," to be published in seventeen vols., by a Board of editors under the presidency of Prof. N. L. Britton. The account of each natural order will be a monograph by a separate author. The area comprised in the "Flora" will be the American continent north of Mexico.

THE *Lancet* states that the Queen has been graciously pleased to intimate to Dr. Thorne Thorne, C.B., the principal medical officer of the Local Government Board, her appreciation of the services which have been rendered by the Medical Department of the Board in taking the measures which it has adopted for preventing the entrance of cholera into this country.

A NEW chemical laboratory, in connection with the Imperial University of St. Petersburg, will be opened next month. The building will contain, in addition to laboratories and a lecture theatre, dwelling accommodation for the professors and their assistants. The cost of erection has been over £25,000, four-fifths of which have been defrayed by the Minister of Education, and the remainder by the University.

A CIRCULAR has been sent to us announcing the conditional re-starting of our American contemporary *Science*, the publication of which was on March 23 suspended, owing to lack of support. The journal is to be subsidised by the American Association for the Advancement of Science, and by Prof. A. Graham Bell and the Hon. Gardiner G. Hubbard; and provided there be a liberal response to the circular from intending subscribers, the journal will be resuscitated before long.

PROF. BRUNCHORST has published an account of the laboratory and scientific appliances of the Marine Zoological Station at Bergen. Established in 1892, the station has always been kept open throughout the entire year, the fjords on the west coast of Norway remaining open throughout the winter, and the air temperature seldom falling much below the freezing-point.

The following ode to Helmholtz appeared in *Punch* of last week, and seems to us so admirable that we reprint it:—

HELMHOLTZ.

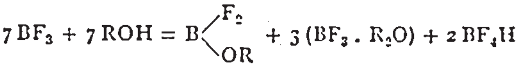
What matter titles? Helmholtz is a name
That challenges, alone, the award of Fame!
When Emperors, Kings, Pretenders, shadows all,
Leave not a dust-trace on our whirling ball,
Thy work, oh grave-eyed searcher, shall endure,
Unmarred by faction, from low passion pure.
To bridge the gulf 'twixt matter-veil and mind
Perchance to mortals, dull-sensed, slow, purblind,
Is not permitted—yet; but patient, keen,
Thou on the shadowy track beyond the Seen,
Didst dog the elusive truth, and seek in sound
The secret of soul-mysteries profound,
Essential Order, Beauty's hidden law!
Marvels to strike more sluggish souls with awe,
Great seekers, lonely-souled, explore that track,
We welcome the wild wonders they bring back
From ventures stranger than an earthly Pole
Can furnish. Distant still that mental goal
To which great spirits strain; but when calm Fame
Sums its bold seekers, Helmholtz, thy great name
Among the foremost shall eternal stand,
Science's pride, and glory of thy land.

From time to time paragraphs appear in the daily papers informing the public that a cure for consumption has been discovered. The last of these so-called discoveries has been heralded in the *Times* (September 14), where it is stated on the authority (?) of the Havas Agency, that a Genoese physician has been able to cure twenty-five out of twenty-seven hopeless cases of consumption by the subcutaneous injection of asses' blood. Strangely enough, the medical papers have remained silent, and we cannot help thinking that it would have been well had the *Times* not been so eager to advertise this mode of treatment before it had gone through the ordeal of medical criticism. The subcutaneous injection of serum of animals into phthisical patients has been extensively tried already and has failed, and it is not likely that asses' serum would have more therapeutic properties than that of dogs or goats, which has proved a failure. It is likely, moreover, that such a premature announcement will do a great deal of harm by raising the hopes of patients and their friends—hopes which are almost sure to be disappointed.

According to news received by the Agent-General for Tasmania, the whale fishery industry of that colony, which for some years past has been in a feeble condition, has recently undergone a revival, whales having been frequently seen on the Tasmanian coasts within the last month or so.

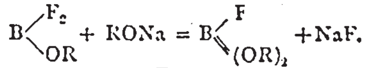
The third annual report of the Department of Agriculture of the Yorkshire College, Leeds, has reached us, and tells of a vast amount of work accomplished during the period under review,—1893-94. The courses of lectures for farmers, &c., and classes for elementary teachers and dairy teachers, and the travelling dairy schools, seem, on the whole, to have been well attended, and the committee has reason for the feeling of satisfaction to which it gives expression. A prospectus of the courses in agriculture for the session 1894-95 is now ready, and may be had of the secretary.

A series of new boron compounds containing fluorine and alcohol radicles, derived from the interaction of boron fluoride and alcohols, are described by M. Gasselin in the September number of the *Annales de Chimie et de Physique*. The mono- and di-fluorine compounds derived from methyl and ethyl alcohol have been isolated in the pure state, and prove to be substances of great chemical activity, affording numerous interesting reactions. When boron trifluoride gas is passed into methyl or ethyl alcohol, strongly cooled by a freezing mixture, the gas is rapidly absorbed and the liquid becomes considerably heated. The reaction occurs in exactly equal molecular proportions, and upon subsequent distillation of the liquid product two main substances are eventually isolated. The first is the di-fluorine compound $B\left\langle\begin{matrix}F_2\\OCH_3\end{matrix}\right.$ or $B\left\langle\begin{matrix}F_2\\OC_2H_5\end{matrix}\right.$, while the second is a remarkable molecular compound of boron trifluoride with methyl or ethyl ether, $BF_3.(CH_3)_2O$ or $BF_3.(C_2H_5)_2O$. The reaction is quantitatively expressed by the following equation, in which R represents the alkyl radicle:



$$7BF_3 + 7ROH = B\left\langle\begin{matrix}F_2\\OR\end{matrix}\right. + 3(BF_3 . R_2O) + 2BF_4H + 2HF + B(OH)_3.$$

Di-fluor methyl borate $B\left\langle\begin{matrix}F_2\\OCH_3\end{matrix}\right.$ distils over as a colourless liquid boiling at 80°. It solidifies in the receiver in the form of long crystals which melt at 41°·5. The analogous ethyl compound boils at 82°, and the crystals melt at 23°. The liquids fume strongly in the air, disseminating suffocating vapours. Water decomposes them with great energy, producing boric acid, fluoboric acid, and the free alcohol. They are insoluble in hydrocarbons, but dissolve with decomposition in alcohol. They are quite permanent in contact with metallic sodium, even under pressure at 100°. Sodium methylate or ethylate, however, react with great energy when brought in contact with them, and if equal molecular proportions are employed, the mono-fluorine compounds are produced.



$$B\left\langle\begin{matrix}F_2\\OR\end{matrix}\right. + RONa = B\left\langle\begin{matrix}F\\(OR)_2\end{matrix}\right. + NaF.$$

The methyl compound $B\left\langle\begin{matrix}F\\(OCH_3)_2\end{matrix}\right.$ boils at 53°, and is a particularly mobile and strongly fuming liquid, which burns with a brilliant green flame, surrounded by a dense white cloud. The ethyl compound is a liquid of similar properties, which boils at 78°. Water decomposes both compounds with some violence and considerable evolution of heat. The molecular compounds of boron trifluoride with methyl and ethyl ether are fuming liquids boiling, respectively, at 126° and 123°, which are likewise energetically decomposed by water. They have been independently prepared by direct union of gaseous boron fluoride with gaseous methyl ether in the one case, and ordinary ethyl ether in the other. The union is instantaneous, and accompanied by considerable rise of temperature in each case. In the case of the formation of the methyl compound a dense cloud is produced the moment the constituent gases come in contact, and the sides of the vessel become covered by hot drops of liquid which rapidly coalesce to form a considerable bulk of the new substance.

The additions to the Zoological Society's Gardens during the past week include a Sykes's Monkey (*Cercopithecus albigularis*, ♂) from East Africa, presented by Miss Marion E. Leitch; a Macaque Monkey (*Macacus cynomolgus*, ♀) from India, presented by Captain W. Townsend; two Alligators (*Alligator mississippiensis*) from the Mississippi, presented by Mr. L. Watson; two Giant Toads (*Bufo marinus*) from Brazil, presented by F. E. Blaauw, Esq.; twenty European Tree Frogs (*Hyla arborea*) European, presented by Mr. G. B. Coleman; an Ostrich (*Struthio camelus*, ♂) from Africa, a Greater Sulphur-crested Cockatoo (*Cacactua galerita*) from Australia, deposited; a Red-sided Eclectus (*Eclectus pectoralis*) from New Guinea, a Toco Toucan (*Rhamphastos toco*) from Guiana, a Diamond Snake (*Morelia spilotes*) from New South Wales, received in exchange; an African Wild Ass (*Equus taeniopus*, ♂), an Axis Deer (*Cervus axis*, ♂), born in the Gardens.